

=> d hist full

(FILE 'HOME' ENTERED AT 15:38:23 ON 19 APR 2006)

FILE 'REGISTRY' ENTERED AT 15:38:33 ON 19 APR 2006

L1           1 SEA ABB=ON PLU=ON 156681-44-6/RN  
              SET LINE 250  
              SET DETAIL OFF  
              SET NOTICE 1 DISPLAY  
              SET LINE LOGIN  
              SET DETAIL LOGIN  
              DIS L1 1 SQIDE  
              SET NOTICE LOGIN DISPLAY

FILE 'BIOSIS, BIOTECHNO, CA, CAPLUS' ENTERED AT 15:40:16 ON 19 APR 2006

FILE 'REGISTRY' ENTERED AT 15:40:24 ON 19 APR 2006

L2           SET SMARTSELECT ON  
              SEL PLU=ON L1 1- CHEM :           4 TERMS  
              SET SMARTSELECT OFF

FILE 'BIOSIS, BIOTECHNO, CA, CAPLUS' ENTERED AT 15:40:25 ON 19 APR 2006

L3           392 SEA ABB=ON PLU=ON L2  
L4           57 SEA ABB=ON PLU=ON L3 (S) (BILE (3A) ACID OR PHYTANIC OR  
              PRISTANIC OR TRIMETHYLUNDECANOIC)  
L5           27 SEA ABB=ON PLU=ON L4 AND (MEASUR? OR QUANTI? OR ACTIVIT? OR  
              AMOUNT)  
L6           12 DUP REM L5 (15 DUPLICATES REMOVED)  
              D L6 IBIB ABS 1-12

FILE HOME

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 156681-44-6 REGISTRY  
CN Racemase,  $\alpha$ -methylacyl coenzyme A (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN  $\alpha$ -Methylacyl CoA racemase  
CN  $\alpha$ -Methylacyl-CoA racemase  
CN 2-Methylacyl-CoA racemase  
MF Unspecified  
CI MAN  
SR CA  
LC STN Files: BIOSIS, CA, CAPLUS, CIN, EMBASE, TOXCENTER, USPATFULL  
DT.CA Caplus document type: Conference; Dissertation; Journal; Patent  
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
PREP (Preparation); PRP (Properties); USES (Uses)  
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
study); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP  
(Properties); USES (Uses)  
  
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*  
99 REFERENCES IN FILE CA (1907 TO DATE)  
100 REFERENCES IN FILE CAPLUS (1907 TO DATE)



Mark a special word or phrase in this record:

Mark

All organisms  
Homo sapiens  
Mus musculus  
Mycobacterium tuberculosis  
Rattus norvegicus

Select one or more organisms in this record:

Submit

#### EC NUMBER COMMENTARY

5.1.99.4

Pathway KEGG Link

No entries in this field

#### RECOMMENDED NAME

GeneOntology No.

alpha-Methylacyl-CoA racemase 8111

#### SYSTEMATIC NAME

2-Methylacyl-CoA 2-epimerase

#### SYNONYMS

2-arylpropionyl-CoA epimerase

2-methylacyl-CoA racemase

alpha-Methylacyl CoA racemase

GenBank U89905-derived protein GI2145184

GenBank U89906-derived protein GI 2145186

Racemase, alpha-methylacyl coenzyme A

Racemase, alpha-methylacyl coenzyme A (Mus musculus clone 3)

Racemase, alpha-methylacyl coenzyme A (Rattus norvegicus clone 11)

#### ORGANISM COMMENTARY LITERATURE

ORGANISM	COMMENTARY	LITERATURE
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

#### CAS REGISTRY NUMBER

#### COMMENTARY

156681-44-6

197731-71-8

racemase, alpha-methylacyl coenzyme A (Mus musculus clone 3) /genBank U89906-derived protein GI 2145186

197731-72-9

racemase, alpha-methylacyl coenzyme A (Rattus norvegicus clone 11) /genBank U89905-derived protein GI2145184

#### REACTION

#### COMMENTARY ORGANISM LITERATURE

(2S)-2-Methylacyl-CoA = (2R)-2-methylacyl-CoA

- - -



#### REACTION TYPE ORGANISM COMMENTARY LITERATURE

Racemization













- - -

#### ORGANISM

#### COMMENTARY LITERATURE

#### SEQUENCE CODE

Homo sapiens	-	<a href="#">2447</a> , <a href="#">2449</a>	-
Mus musculus	-	<a href="#">2448</a>	-
Mycobacterium tuberculosis	-	<a href="#">649225</a>	-
Rattus norvegicus	-	<a href="#">2446</a> , <a href="#">2447</a> , <a href="#">2448</a> , <a href="#">2449</a> , <a href="#">649732</a>	-

SUBSTRATE	PRODUCT	REACTION DIAGRAM	ORGANISM	COMMENTARY/ Substrate r:=reversible ir:=irreversible	LITERATURE/ Substrate	COMI Prodi
(S)-2-Methylmyristoyl-CoA	(R)-2-Methylmyristoyl-CoA		Rattus norvegicus	r	<a href="#">2446</a>	
(S)-2-Methyltetradecanoyl-CoA	(R)-2-Methyltetradecanoyl-CoA		Homo sapiens	r	<a href="#">2447</a>	
(S)-Pristanoyl-CoA	(R)-Pristanoyl-CoA		Homo sapiens	-	<a href="#">2447</a>	
(S)-Pristanoyl-CoA	(R)-Pristanoyl-CoA		Rattus norvegicus	r	<a href="#">2446</a>	
(S)-Pristanoyl-CoA	(R)-Pristanoyl-CoA		Rattus norvegicus	r	<a href="#">2447</a>	
(S)-Trihydroxycoprostanoyl-CoA	(R)-Trihydroxycoprostanoyl-CoA		Homo sapiens	-	<a href="#">2447</a>	
(S)-Trihydroxycoprostanoyl-CoA	(R)-Trihydroxycoprostanoyl-CoA		Rattus norvegicus	-	<a href="#">2447</a>	
(S)-Trihydroxycoprostanoyl-CoA	(R)-Trihydroxycoprostanoyl-CoA		Rattus norvegicus	r	<a href="#">2446</a>	
More	?		Homo sapiens	no activity with free fatty acids	<a href="#">2447</a>	
More	?		Mycobacterium tuberculosis	key enzyme in the metabolism of 2-methyl-branched fatty acids	<a href="#">649225</a>	
More	?		Rattus norvegicus	-	<a href="#">2447</a>	
More	?		Rattus norvegicus	enzyme is involved in the alternative pathway of cholesterol side-chain oxidation. The alternative pathway consists of alpha-methylacyl-CoA racemase, and peroxisomal multifunctional enzyme type 1 (peroxisomal multifunctional 2-enoyl-CoA	<a href="#">649732</a>	

More	?		Rattus norvegicus	hydratase/(S)-3-hydroxyacyl-CoA dehydrogenase) no activity with 3-methyl-branched or linear-chain acyl-CoAs	<u>2446</u>
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NATURAL SUBSTRATES    NATURAL PRODUCTS    REACTION DIAGRAM    ORGANISM SUBSTRATE    COMMENTARY (Substrate)    LITERATURE PRODUCT    COMMENTARY (Product)    LITERATURE (Product)    O (f

















No entries in this field

COFACTOR ORGANISM COMMENTARY LITERATURE IMAGE

No entries in this field

METALS and IONS ORGANISM COMMENTARY LITERATURE

No entries in this field

INHIBITORS	ORGANISM	COMMENTARY	LITERATURE	IMAGE
1-Ethyl-3-(3-dimethylaminopropyl)-carbodiimide	Rattus norvegicus	-	<u>2446</u>	
2-(4-Isobutylphenyl)propionic acid	Homo sapiens	-	<u>2447</u>	
2-(4-Isobutylphenyl)propionic acid	Rattus norvegicus	-	<u>2447</u>	
2-(4-Isobutylphenyl)propionic acid	Rattus norvegicus	i.e. ibuprofen, strongest of all competitive inhibitors tested	<u>2446</u>	
2-Methylmyristoyl-CoA	Homo sapiens	-	<u>2447</u>	
2-Methylmyristoyl-CoA	Rattus norvegicus	-	<u>2447</u>	
2-Methylmyristoyl-CoA	Rattus norvegicus	inhibits reaction with 2-pristanoyl-CoA	<u>2446</u>	
2-Methyloctanoyl-CoA	Homo sapiens	-	<u>2447</u>	
2-Methyloctanoyl-CoA	Rattus norvegicus	-	<u>2447</u>	
2-Methyloctanoyl-CoA	Rattus norvegicus	inhibits reaction with 2-pristanoyl-CoA	<u>2446</u>	
5,5'-Dithiobis(2-nitrobenzoate)	Rattus norvegicus	inhibition is reversed by incubation of the inactivated enzyme with 10 mM dithiothreitol	<u>2446</u>	
Cu <sup>2+</sup>	Rattus norvegicus	-	<u>2446</u>	
Diethylpyrocarbonate	Rattus norvegicus	-	<u>2446</u>	
Diisopropylphosphofluoridate	Rattus norvegicus	-	<u>2446</u>	
Fe <sup>2+</sup>	Rattus norvegicus	slight inhibition	<u>2446</u>	
Hg <sup>2+</sup>	Rattus	-	<u>2446</u>	

	norvegicus			<a href="#">image</a>
More	Rattus norvegicus	no inhibition by iodoacetamide	<a href="#">2446</a>	-
NEM	Rattus norvegicus	weak	<a href="#">2446</a>	<a href="#">●_2D-image</a>
Palmitoyl-CoA	Homo sapiens	inhibition is caused by the formation of stable mixed micelles	<a href="#">2447</a>	<a href="#">●_2D-image</a>
Palmitoyl-CoA	Rattus norvegicus	-	<a href="#">2447</a>	<a href="#">●_2D-image</a>
Palmitoyl-CoA	Rattus norvegicus	stimulates at low concentrations, inhibits above 0.1 mM	<a href="#">2446</a>	<a href="#">●_2D-image</a>
thimerosal	Rattus norvegicus	slight	<a href="#">2446</a>	<a href="#">●_2D-image</a>

ACTIVATING COMPOUND	ORGANISM	COMMENTARY	LITERATURE	IMAGE
Palmitoyl-CoA	Rattus norvegicus	stimulates at low concentrations, inhibits above 0.1 mM	<a href="#">2446</a>	<a href="#">●_2D-image</a>

KM VALUE [mM]	KM VALUE [mM] Maximum	SUBSTRATE	ORGANISM	COMMENTARY	LITERATURE	IMAGE
0.076	-	pristanoyl-CoA	Rattus norvegicus	-	<a href="#">2446</a>	<a href="#">●_2D-image</a>
0.172	-	pristanoyl-CoA	Homo sapiens	-	<a href="#">2447</a>	<a href="#">●_2D-image</a>
0.0316	-	Trihydroxycoprostanoyl-CoA	Homo sapiens	-	<a href="#">2447</a>	<a href="#">●_2D-image</a>
0.06	-	Trihydroxycoprostanoyl-CoA	Rattus norvegicus	-	<a href="#">2446</a>	<a href="#">●_2D-image</a>

Ki VALUE [mM] Ki VALUE [mM] Maximum INHIBITOR ORGANISM COMMENTARY LITERATURE IMAGE

No entries in this field

TURNOVER NUMBER[1/s] TURNOVER NUMBER MAXIMUM[1/s] SUBSTRATE ORGANISM COMMENTARY LITERATURE IMAGE

No entries in this field

SPECIFIC ACTIVITY [μmol/min/mg]	SPECIFIC ACTIVITY MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
additional information	-	Homo sapiens	development of a coupled assay based on the use of pristanoyl-CoA oxidase/peroxidase	<a href="#">2449</a>
additional information	-	Rattus norvegicus	development of a coupled assay based on the use of pristanoyl-CoA oxidase/peroxidase	<a href="#">2449</a>
additional information	-	Rattus norvegicus	development of a very sensitive and convenient radiometric assay	<a href="#">2446</a>

pH OPTIMUM	pH MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
8	-	Homo sapiens	-	<a href="#">2447</a>
7	-	Rattus norvegicus	trihydroxycoprostanoyl-CoA	<a href="#">2446</a>
6	-	Rattus norvegicus	pristanoyl-CoA	<a href="#">2446</a>

pH RANGE	pH RANGE MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
6.5	9	Homo sapiens	more than 80% of maximal activity between pH 6.5 and pH 9.0, inactive below pH 5	<a href="#">2447</a>

#### TEMPERATURE OPTIMUM TEMPERATURE OPTIMUM MAXIMUM ORGANISM COMMENTARY LITERATURE

No entries in this field

#### TEMPERATURE RANGE TEMPERATURE MAXIMUM ORGANISM COMMENTARY LITERATURE

No entries in this field

SOURCE TISSUE	ORGANISM	COMMENTARY	LITERATURE
adrenal gland	Homo sapiens	weak	<a href="#">2449</a>
cerebellum	Homo sapiens	weak	<a href="#">2449</a>
chorionic villus	Homo sapiens	-	<a href="#">2447</a>
fibroblast	Homo sapiens	-	<a href="#">2447</a>
harderian gland	Homo sapiens	-	<a href="#">2449</a>
heart	Homo sapiens	weak	<a href="#">2449</a>
Hep-G2 cell	Homo sapiens	-	<a href="#">2447</a>
intestinal mucosa	Homo sapiens	-	<a href="#">2449</a>
kidney	Homo sapiens	-	<a href="#">2449</a>
liver	Homo sapiens	-	<a href="#">2447</a> , <a href="#">2449</a>
liver	Rattus norvegicus	-	<a href="#">2446</a> , <a href="#">2447</a> , <a href="#">2449</a>
lung	Homo sapiens	weak	<a href="#">2449</a>
muscle	Homo sapiens	weak	<a href="#">2449</a>
pancreas	Homo sapiens	weak	<a href="#">2449</a>
skin fibroblast	Homo sapiens	-	<a href="#">2447</a>
spleen	Homo sapiens	weak	<a href="#">2449</a>
telencephalon	Homo sapiens	weak	<a href="#">2449</a>
testis	Homo sapiens	weak	<a href="#">2449</a>
thymus	Homo sapiens	weak	<a href="#">2449</a>

LOCALIZATION	ORGANISM	COMMENTARY	GeneOntology No.	LITERATURE
mitochondrion	Homo sapiens	only 10-30% of the activity is found in mitochondria	<a href="#">5739</a>	<a href="#">2447</a>
mitochondrion	Rattus norvegicus	co-distributed exclusively with mitochondrial marker enzymes	<a href="#">5739</a>	<a href="#">2447</a>
peroxisome	Rattus norvegicus	-	<a href="#">5777</a>	<a href="#">649732</a>
peroxisome	Rattus norvegicus	bulk activity	<a href="#">5777</a>	<a href="#">2447</a>

ACCESSION CODE	ENTRY NAME	ORGANISM	NO. OF AA	MOLECULAR WEIGHT[Da]	SOURCE	Sequence
<a href="#">Q9UHK6</a> <a href="#">pBLAST</a>	AMACR_HUMAN	Homo sapiens	382	42360	Swiss-Prot	<a href="#">Show Sequence</a>

<a href="#">Q09174</a> <a href="#">pBLAST</a>	AMACR_MOUSE	Mus musculus	380	41587	Swiss-Prot	<a href="#">Show Sequence</a>
<a href="#">P70473</a> <a href="#">pBLAST</a>	AMACR_RAT	Rattus norvegicus	381	41697	Swiss-Prot	<a href="#">Show Sequence</a>
<a href="#">Q4IYP2</a> <a href="#">pBLAST</a>	Q4IYP2_AZOVI	Azotobacter vinelandii AvOP	397	42454	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4LND9</a> <a href="#">pBLAST</a>	Q4LND9_9BURK	Burkholderia cenocepacia HI2424	455	49064	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4LQP6</a> <a href="#">pBLAST</a>	Q4LQP6_9BURK	Burkholderia cenocepacia HI2424	350	36615	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4LWN5</a> <a href="#">pBLAST</a>	Q4LWN5_9BURK	Burkholderia cenocepacia HI2424	406	43669	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4LXS2</a> <a href="#">pBLAST</a>	Q4LXS2_9BURK	Burkholderia cenocepacia HI2424	406	43786	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4NIB3</a> <a href="#">pBLAST</a>	Q4NIB3_9MICC	Arthrobacter sp. FB24	419	45712	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4NR64</a> <a href="#">pBLAST</a>	Q4NR64_9DELT	Anaeromyxobacter dehalogenans 2CP-C	391	40575	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4AQK8</a> <a href="#">pBLAST</a>	Q4AQK8_9BURK	Polaromonas sp. JS666	433	45750	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4ASU3</a> <a href="#">pBLAST</a>	Q4ASU3_9BURK	Polaromonas sp. JS666	407	43920	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4AVI5</a> <a href="#">pBLAST</a>	Q4AVI5_9BURK	Polaromonas sp. JS666	416	45848	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4B2Y0</a> <a href="#">pBLAST</a>	Q4B2Y0_9BURK	Polaromonas sp. JS666	407	43807	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q4B520</a> <a href="#">pBLAST</a>	Q4B520_9BURK	Polaromonas sp. JS666	416	44626	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q447U6</a> <a href="#">pBLAST</a>	Q447U6_SOLUS	Solibacter usitatus Ellin6076	403	44029	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q422R9</a> <a href="#">pBLAST</a>	Q422R9_DESHA	Desulfitobacterium hafniense DCB-2	355	39734	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3VZH3</a> <a href="#">pBLAST</a>	Q3VZH3_9ACTO	Frankia sp. EAN1pec	423	44956	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3VZL8</a> <a href="#">pBLAST</a>	Q3VZL8_9ACTO	Frankia sp. EAN1pec	379	40254	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3W154</a> <a href="#">pBLAST</a>	Q3W154_9ACTO	Frankia sp. EAN1pec	378	40088	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3W4K6</a> <a href="#">pBLAST</a>	Q3W4K6_9ACTO	Frankia sp. EAN1pec	369	39541	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3W562</a> <a href="#">pBLAST</a>	Q3W562_9ACTO	Frankia sp. EAN1pec	396	43121	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3W5F2</a> <a href="#">pBLAST</a>	Q3W5F2_9ACTO	Frankia sp. EAN1pec	451	48468	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3WFQ7</a> <a href="#">pBLAST</a>	Q3WFQ7_9ACTO	Frankia sp. EAN1pec	402	43090	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3WFX1</a> <a href="#">pBLAST</a>	Q3WFX1_9ACTO	Frankia sp. EAN1pec	389	41842	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3WHJ3</a> <a href="#">pBLAST</a>	Q3WHJ3_9ACTO	Frankia sp. EAN1pec	462	49208	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3WJ86</a> <a href="#">pBLAST</a>	Q3WJ86_9ACTO	Frankia sp. EAN1pec	771	81365	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q3WTP8</a>	Q3WTP8_9RHIZ	Mesorhizobium sp. BNC1	419	45059	TrEMBL	<a href="#">Show</a>



<u>pBLAST</u>						<u>Sequence</u>
<u>Q3WTR2</u> <u>pBLAST</u>	Q3WTR2_9RHIZ	Mesorhizobium sp. BNC1	364	38783	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3WXX8</u> <u>pBLAST</u>	Q3WXX8_9RHIZ	Mesorhizobium sp. BNC1	378	40584	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3X096</u> <u>pBLAST</u>	Q3X096_9ACTN	Rubrobacter xylanophilus DSM 9941	404	44338	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3X5E1</u> <u>pBLAST</u>	Q3X5E1_9ACTN	Rubrobacter xylanophilus DSM 9941	395	43719	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3X5K5</u> <u>pBLAST</u>	Q3X5K5_9ACTN	Rubrobacter xylanophilus DSM 9941	414	45231	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3MVD3</u> <u>pBLAST</u>	Q3MVD3_9DELT	Syntrophobacter fumaroxidans MPOB	391	42948	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3QQ94</u> <u>pBLAST</u>	Q3QQ94_9RHOB	Silicibacter sp. TM1040	373	40180	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3QTP0</u> <u>pBLAST</u>	Q3QTP0_9RHOB	Silicibacter sp. TM1040	395	42380	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3FMR0</u> <u>pBLAST</u>	Q3FMR0_9BURK	Rhodoferrax ferrireducens DSM 15236	362	38569	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3FP81</u> <u>pBLAST</u>	Q3FP81_9BURK	Rhodoferrax ferrireducens DSM 15236	418	44695	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3FU66</u> <u>pBLAST</u>	Q3FU66_9BURK	Rhodoferrax ferrireducens DSM 15236	387	41780	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3GL65</u> <u>pBLAST</u>	Q3GL65_9GAMM	Psychrobacter cryohalolentis K5	352	38399	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3GNY3</u> <u>pBLAST</u>	Q3GNY3_9GAMM	Psychrobacter cryohalolentis K5	423	45301	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3K8D2</u> <u>pBLAST</u>	Q3K8D2_PSEFL	Pseudomonas fluorescens PfO-1	393	42243	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q391W0</u> <u>pBLAST</u>	Q391W0_9BURK	Burkholderia sp. 383	388	41422	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q392M2</u> <u>pBLAST</u>	Q392M2_9BURK	Burkholderia sp. 383	381	40921	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q39B91</u> <u>pBLAST</u>	Q39B91_9BURK	Burkholderia sp. 383	350	36647	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q39DK7</u> <u>pBLAST</u>	Q39DK7_9BURK	Burkholderia sp. 383	463	49229	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q39LX9</u> <u>pBLAST</u>	Q39LX9_9BURK	Burkholderia sp. 383	384	40897	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q39MI0</u> <u>pBLAST</u>	Q39MI0_9BURK	Burkholderia sp. 383	388	41225	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q39MT5</u> <u>pBLAST</u>	Q39MT5_9BURK	Burkholderia sp. 383	350	37383	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q39MW4</u> <u>pBLAST</u>	Q39MW4_9BURK	Burkholderia sp. 383	386	41428	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q39N02</u> <u>pBLAST</u>	Q39N02_9BURK	Burkholderia sp. 383	369	38590	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q3CNG3</u> <u>pBLAST</u>	Q3CNG3_ALTAT	Pseudoalteromonas atlantica T6c	386	42619	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q8F1J1</u> <u>pBLAST</u>	Q8F1J1_LEPIN	Leptospira interrogans	390	43625	TrEMBL	<a href="#">⬇ Show Sequence</a>
<u>Q89XH6</u> <u>pBLAST</u>	Q89XH6_BRAJA	Bradyrhizobium japonicum	388	41545	TrEMBL	<a href="#">⬇ Show Sequence</a>

<a href="#">Q06543</a> <a href="#">pBLAST</a>	Q06543_MYCTU	Mycobacterium tuberculosis	360	38685	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q6FBN2</a> <a href="#">pBLAST</a>	Q6FBN2_ACIAD	Acinetobacter sp. (strain ADP1)	407	45097	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q6FBN5</a> <a href="#">pBLAST</a>	Q6FBN5_ACIAD	Acinetobacter sp. (strain ADP1)	405	44587	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q7U0J6</a> <a href="#">pBLAST</a>	Q7U0J6_MYCBO	Mycobacterium bovis	360	38685	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q8YB25</a> <a href="#">pBLAST</a>	Q8YB25_BRUME	Brucella melitensis	405	43553	TrEMBL	<a href="#">Show Sequence</a>
<a href="#">Q8YB81</a> <a href="#">pBLAST</a>	Q8YB81_BRUME	Brucella melitensis	415	45073	TrEMBL	<a href="#">Show Sequence</a>

PDB                      ORGANISM  
[1X74, download](#) Mycobacterium tuberculosis

MOLECULAR WEIGHT	MOLECU LR WEIGHT MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
75000	-	Mycobacterium tuberculosis	dynamic light-scattering measurement	<a href="#">649225</a>
47700	-	Homo sapiens	gel filtration	<a href="#">2447</a>
44700	-	Rattus norvegicus	gel filtration	<a href="#">2446</a>

SUBUNITS	ORGANISM	COMMENTARY	LITERATURE
Dimer	Mycobacterium tuberculosis	2 * 39000, SDS-PAGE	<a href="#">649225</a>
Monomer	Homo sapiens	1 * 47100, SDS-PAGE	<a href="#">2447</a>
Monomer	Rattus norvegicus	-	<a href="#">2447</a>
Monomer	Rattus norvegicus	1 * 44900, SDS-PAGE	<a href="#">2446</a>

#### POSTTRANSLATIONAL MODIFICATION ORGANISM COMMENTARY LITERATURE

No entries in this field

Crystallization/COMMENTARY	ORGANISM	LITERATURE
hanging-drop vapour-diffusion method, the best crystals grow in 1.26 M ammonium phosphate, pH 7.0 using a protein concentration of 24 mg/ml	Mycobacterium tuberculosis	<a href="#">649225</a>

#### pH STABILITY pH STABILITY MAXIMUM ORGANISM COMMENTARY LITERATURE

No entries in this field

TEMPERATURE STABILITY	TEMPERATURE STABILITY MAXIMUM	ORGANISM	COMMENTARY	LITERATURE
50	-	Homo sapiens	half-life: 15 min	<a href="#">2447</a>
35	40	Homo sapiens	slow loss of activity	<a href="#">2447</a>

#### GENERAL STABILITY ORGANISM LITERATURE

No entries in this field

#### ORGANIC SOLVENT ORGANISM COMMENTARY LITERATURE

No entries in this field

## OXIDATION STABILITY ORGANISM LITERATURE

No entries in this field

## STORAGE STABILITY ORGANISM LITERATURE

No entries in this field

## Purification/COMMENTARY ORGANISM LITERATURE

-	Homo sapiens	<a href="#">2447</a>
-	Rattus norvegicus	<a href="#">2446</a> , <a href="#">2448</a>
-	Mycobacterium tuberculosis	<a href="#">649225</a>

## Cloned/COMMENTARY ORGANISM LITERATURE

-	Mus musculus	<a href="#">2448</a>
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expression in Escherichia coli Rattus norvegicus [2448](#)

## ENGINEERING ORGANISM COMMENTARY LITERATURE

No entries in this field

## Renatured/COMMENTARY ORGANISM LITERATURE

No entries in this field

## APPLICATION ORGANISM COMMENTARY LITERATURE

medicine	Homo sapiens	the activity of EC 5.1.99.4 may prove to be a valuable parameter for the prenatal diagnosis of general defects of peroxisome biogenesis such as Zellweger syndrome	<a href="#">2447</a>
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## DISEASE TITLE OF PUBLICATION LINK TO PUBMED

No entries in this field

REF.	AUTHORS	TITLE	JOURNAL	VOL.	PAGES	YEAR	ORGANISM	COMMENTARY	LINK TO PUBMED
<a href="#">2446</a>	Schmitz, W.; Fingerhut, R.; Conzelmann, E.	Purification and properties of an alpha-methylacyl-CoA racemase from rat liver	Eur. J. Biochem.	222	313-323	1994	Rattus norvegicus	c	● <a href="#">PubMed</a>
<a href="#">2447</a>	Schmitz, W.; Albers, C.; Fingerhut, R.; Conzelmann, E.	Purification and characterization of an alpha-methylacyl-CoA racemase from human liver	Eur. J. Biochem.	231	815-822	1995	Homo sapiens, c Rattus norvegicus	c	● <a href="#">PubMed</a>
<a href="#">2448</a>	Schmitz, W.; Helander, H.M.; Hiltunen, J.K.; Conzelmann, E.	Molecular cloning of cDNA species for rat and mouse liver alpha-methylacyl-CoA racemase	Biochem. J.	326	883-889	1997	Mus musculus, c Rattus norvegicus	c	● <a href="#">PubMed</a>
<a href="#">2449</a>	Van	2-Methylacyl	Biochim.	1347	62-68	1997	Homo sapiens, c	c	● <a href="#">PubMed</a>

	Veldhoven, P.P.; Croes, K.; Casteels, M.; Mannaerts, G.P.	racemase: a coupled assay based on the use of pristanoyl-CoA oxidase/peroxidase and reinvestigation of its subcellular distribution in rat and human liver	Biophys. Acta				Rattus norvegicus	
649225	Bhaumik, P.; Kursula, P.; Ratas, V.; Conzelmann, E.; Hiltunen, J.K.; Schmitz, W.; Wierenga, R.K.	Crystallization and preliminary X-ray diffraction studies of an alpha-methylacyl-CoA racemase from Mycobacterium tuberculosis	Acta Crystallogr. Sect. D	59	353-355	2003	Mycobacterium tuberculosis	● PubMe
649732	Cuebas, D.A.; Phillips, C.; Schmitz, W.; Conzelmann, E.; Novikov, D.K.	The role of alpha-methylacyl-CoA racemase in bile acid synthesis	Biochem. J.	363	801-807	2002	Rattus norvegicus	● PubMe

#### LINKS TO OTHER DATABASES (specific for EC-Number 5.1.99.4)

[ExPASy](#)

[KEGG](#)

NCBI: [PubMed](#), [Protein](#), [Nucleotide](#), [Structure](#), [Genome](#), [OMIM](#), [Domains](#)

[IUBMB Enzyme Nomenclature](#)

[PDB database\(3D structure\)](#)

[PROSITE Database of protein families and domains](#)

#### [SYSTEMS](#)

[Protein Mutant Database](#)

[Structural Classification of Proteins \(SCOP\)](#)

[Protein Structure Classification \(CATH\)](#)

[InterPro \(database of protein families, domains and functional sites\)](#)